

REMARKS

The Applicant has received and reviewed the Office Action dated April 11, 2006 wherein the Office rejected claims 8 and 9 under U.S.C. 102(b) as being anticipated by the reference KR 8902848, the reference of Minami (U.S. Patent No. 3,866,568) or the reference of Takahashi et al. (U.S. Patent No. 5,567,539); rejected claims 8-10 under 102(b) as being anticipated by the reference JP780100390; rejected claims 8 and 9 under U.S.C. 102(b) as being anticipated by the reference JP 78020780; rejected claims 8-10 under U.S.C. 103(a) as being made obvious by the reference JP780100390; rejected claims 8 and 9 under U.S.C. 103(a) as being made obvious by the reference JP 78020780; rejected claims 8 and 9 under U.S.C. 103(a) as being unpatentable over KR 8902848 in view of the reference of Oehler et al. (U.S. Patent No. 5,820,927); rejected claims 8-10, and 12 under U.S.C. 103(a) as being unpatentable over KR 8902848/JP 780100390/JP 78020780 in view of the reference of Rosenblatt (U.S. Patent No. 6,365,169); and rejected claim 10 under U.S.C. 102(b)) as being anticipated by the reference JP78020780.

Rejection under 35 U.S.C. 102(b) to KR 8902848, Minami, or Takahashi et al.

Applicant's method claims 8 and 9 stand rejected under 35 U.S.C. 102(b) as being anticipated by the reference KR 8902848, the reference of Minami (U.S. Patent No. 3,866,568) or the reference of Takahashi et al. (U.S. Patent No. 5,567,539). The Applicant respectfully disagrees with the Office's aforementioned rejection of Applicant's method claims 8 and 9.

In regards to Applicant's independent method claim 8, Applicant's independent method claim 8 calls for a method of applying a water treatment composition to an article including the step of:

“...applying a metal ion yielding material in particle form to the adhesive on the web” (Emphasis added.)

The Applicant respectfully submits that a review of the references of Minami and Takahashi et al. reveal that the references of Minami and Takahashi et al. each do not teach the step of applying metal ion yielding materials in particle form to an adhesive on a web. On page 5, lines 3-5 of the Office Action dated April 11, 2006, the Office commented that:

“...each of Minami and Takahashi et al is applied not for teaching the step of applying metal ions yielding materials in particle form to an adhesive on a web, but as evidence to confirm the Examiner's interpretation of the term “drying” of hot metal adhesive.” (Emphasis added.)

In view of the Office's above comments, the Applicant respectfully disagrees with the Office's citation of the reference of Minami and the reference of Takahashi et al. in the Office's rejection of Applicant's method claims 8 and 9 under 35 U.S.C. 102(b). More specifically, the Applicant respectfully submits that if the reference of Minami and the reference of Takahashi et al each does not teach “....the step of applying metal ions yielding materials in particle form to an adhesive on a web...” as called for in Applicant's method claims 8 and 9, then the Office's rejection of Applicant's method claims 8 and 9 under 35 U.S.C. 102(b) as being anticipated by the reference of Minami or the reference

of Takahashi et al. is not a proper rejection. Note in the case of *Atlas Powder Co. v. IRECO Inc.*, wherein the Federal Circuit held that :

“To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” Emphasis added, see *Atlas Powder Co. v. IRECO Inc.*, 51 USPQ2d 1943, 1945 (Fed. Cir. 1999), citing *In re Schreiber*, 44 USPQ 1429, 1477 (Fed. Cir. 1997)

It is respectfully submitted that since the references of Minami and Takahashi et al each is applied not for teaching the step of applying metal ions yielding materials in particle form to an adhesive on a web as called for in Applicant’s method claims 8 and 9, the Applicant respectfully submits that Applicant’s method claims 8 and 9 are allowable over the references of Minami and Takahashi et al.

It is for the above reasons that the Applicant respectfully submits that Applicant’s method claims 8 and 9 are allowable over the reference of Minami and the reference of Takahashi et al.

In regards to the reference KR 8902848, the Office on page 4, lines 16-20 of the Office Action dated April 11, 2006, in support of the Office’s rejection of Applicant’s claim 10 under U.S.C. 102(b) as being anticipated by the reference JP 78020780, stated:

“..., the translated text (See USPTO translation) describes the relevant part as follows: “When forming the filter 8, one side of the non-woven fabric 11’ and 11” is coated with an adhesive, and the adhesive-coated side is fusion bonded to the activated carbon to fix the activated carbon” (See page 4, lines 20-22).”

The Applicant respectfully submits that the above disclosure of the fusion bonding of activated carbon to a side of KR 8902848's non-woven fabric containing an adhesive coating does not anticipate the Applicant's step of applying of metal ion yielding material in particle form to the adhesive as called for in Applicant's independent method claim 10. It is respectfully submitted that the reference of KR 8902848 is unclear whether the activated carbons are fusion bonded to the adhesive or the non-woven fabric itself. It is noted that it is more likely that the reference KR 8902848 teaches that the activated carbons are fusion bonded to the non-woven fabric itself and not to the adhesive as the generally adhesion properties of an adhesive would alleviate the need for fusion bonding if KR 8902848's activated carbon were applied directly to KR 8902848's adhesive.

The Applicant respectfully further notes that the Office is currently rejecting Applicant's claims 8 and 9 under 35 U.S.C. 102(b) as being anticipated by the references KR 8902848. In *ATD Corp. v. Lydall, Inc.*, the Federal Circuit held that in order for a reference to anticipate, the:

“... anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention.”¹
(Emphasis added.)

In view of *ATD Corp. v. Lydall, Inc.*, the Applicant respectfully submits that the KR 8902848 reference does not anticipate Applicant's independent claim 8 as the reference KR 8902848 does not describe with sufficient clarity and detail the use and function of the

¹ *ATD Corp. v. Lydall, Inc.*, 48 USPQ 2d 1321, 1328 (Fed. Cir. 1998)

adhesive so as to anticipate the step of "...applying a metal ion yielding material in particle form to the adhesive on the web" of Applicant's independent method claim 8.

In regards to the KR 8902848 reference's disclosure of the adhesive, the Applicant respectfully submits under *In re Oelrich*² that the mere disclosure of an adhesive coating the inner side of the nonwoven fabrics is not sufficient to lead to the conclusion that the silver-added active carbon and untreated active carbon of the KR 8902848 reference are actually applied to the adhesive. Note per the Applicant's above argument that the KR 8902848 reference actually teaches away from the application of the active carbons to the adhesive through the disclosure that the mesh formed by KR 8902848's fabrics 11' and 11" already functions to prevent the active carbon from escaping or releasing from KR 8902848's filter 8.

In further regards to KR 8902848, it is respectfully noted that although the reference KR 8902848 (in the abstract) discloses in parentheses that the inner side of the nonwoven fabrics is coated with adhesive, the Applicant respectfully submits that the adhesive cited in KR 8902848 is for bonding KR 8902848's sheets of fabrics 11' and 11" together to prevent the sheets of fabrics 11' and 11" from blistering. (See page 4 of the Applicant's translation of the KR 8902848 reference, a copy of which was previously submitted with the Office.) The Applicant further submits that the KR 8902848 reference teaches away from the use of an adhesive to secure the silver-added active carbon and untreated active

² *In re Oelrich*, 212 USPQ 323, 326 (C.C.P.A.) (quoting *Hasggirg v. Kemmer*, 40 USPQ 665, 667 (C.C.P.A. 1939) ("Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.")

carbon to fabrics 11' and 11" through the disclosure on page 4, lines 24-26 of the Applicant's translation of the KR 8902848 reference that:

"... the mesh of the fabrics is finer than the activated carbon, which thereby is prevent from being release."

In view of KR 8902848's above disclosure, the Applicant respectfully submits that there lacks a need for securement of the silver-added active carbon and untreated active carbon to KR 8902848's fabrics 11' and 11" as the mesh formed by fabrics 11' and 11" already functions to prevent the silver-added active carbon and untreated active carbon from escaping or releasing from filter 8. (See Figures 3, 4, 5, and 6 of the KR 8902848 reference.)

It is for the above reasons that the Applicant submits that Applicant's independent method claim 8 is allowable over the reference KR 8902848, the reference of Minami and the reference of Takahashi et al.

Rejection under 35 U.S.C. 102(b) to JP 78020780

Applicant's claims 8 and 9 call for a "... method of applying a water treatment composition to an article ..." including the step of:

"... allowing the adhesive to dry to secure the metal ion yielding material to the web of material."

On page 6, lines 14-19 of the Office Action dated April 11, 2006, the Office stated:

“It is well known in the art that *resins* can be formulated either was water based or as solvent based. In both cases the epoxy resin binder should be dried to secure powder to the plate (note that adhesive of any kind should be dried (cooled, cured), as evidenced by JP 51067462 (See Abstract) or solvent removing to secure an object to a substrate). The specification as filed also describes the use of epoxy resin as an adhesive, which supposed to be dried to secure metal ion yielding particles (See page 6, line 9).”

The Applicant respectfully disagrees with the Office’s above comments that “...adhesive of any kind should be dried...” It is submitted that the main purpose of an adhesive is to function to adhere one article to another article. Although an adhesive can adhere through a drying process, it is respectfully submitted that an adhesive can also adhere without having to dry. Note for example adhesives that adhere under water.

In further regards to Applicant’s claims 8 and 9, on page 5, lines 10-19 of the Office Action dated April 11, 2006, the Office stated:

“The Applicant cannot strenuously object to the Office’s use of the term “dried” because Applicants’ specification does not define the term “drying” as being NOT interchangeable with the terms “cooled” and “cured.”

The Applicant respectfully disagrees with the Office’s above comments. Although the Applicant agrees that “... pending claims must be given the broadest reasonable interpretation consistent with the specification,...” the Applicant respectfully submits that the Applicant’s specification does not support the Office’s interpretation of the “dry” as being interchangeable with the term “cure” or “cured.”

In regards to the Office’s comment that the Applicants’ specification does not define the term “drying” as being NOT interchangeable with the term “cured,” the Applicant

respectfully submits that it would be an undue burden to require an Applicant to provide a laundry list of terms in the specification that are not interchangeable with terms used in the claims. It is further respectfully submitted that in situations in which a common term found in the claim is not specifically defined in the specification, use of a dictionary has been held to be proper to help determine the common meaning of the term. (See for example *American Permahedge, Inc. v. Barcana, Inc.*, 41 USPQ 2d 1614, 1616-17 (Fed. Cir. 1997))

In view of the above, the Applicant respectfully submits that the term "dry" is defined on page 248 of *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY* as:

"1. free from moisture; not moist; not wet 14. dehydrated ... 26. to make dry; free from moisture: to dry the dishes. – v.i. 27. to become dry; lose moisture ..." (Take from *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY*, © 1997, page 248, by Random House, Inc. New York, New York)

The Applicant has enclosed a copy of page 248 of *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY* with the present response. It is respectfully submitted that the above definition for the term "dry" involves the removal of moisture or being free of moisture. It is noted however that *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY* does not define the term "dry" or "drying" as being interchangeable with the term "cure" or "cured." Further note that *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY* does not even provide any reference(s) to the term "cure" or "curing" in its definition for the term "dry." (See page 248 of *WEBSTER'S UNIVERSAL COLLEGE DICTIONARY*.)

It is for the above reasons that the Applicant respectfully submits that the Applicant's specification does not support the Office's interpretation of the "dry" as being interchangeable with the term "cure" or "cured."

Rejection of claim 10 under 35 U.S.C. 102(b) to JP 78020780

Applicant's claim 10 calls for a "... method of applying a water treatment composition to an article ..." including the step of:

"...applying the water treatment material to the adhesive on said solid structure..."
(Emphasis added.)

On page 3, lines 21-23 and page 4, lines 1-6 of the Office Action dated April 11, 2006, in support of the Office's rejection of Applicant's claim 10 under U.S.C. 102(b) as being anticipated by the reference JP 78020780, the Office stated:

"... Translation of JP 78020780 shows that the silver-salt-containing powder (21) is bonded to a substrate 23 by means of adhesive (22) in such a way as to expose the powder as shown at Fig. 6 (See page 7, lines 10-16)." Clearly, to expose the powder as shown as Fig. 6, the powder should be adhered to applied adhesive. Or it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied an adhesive to a substrate then a silver-salt-containing powder in JP 78020780 (JP 53020780) with the expectation of providing the desired exposed powder."

The Applicant respectfully traverse the Examiner's above statement as the Office's translation of JP 78020780 does not clearly teach the step of "...applying the water treatment material to the adhesive on said solid structure..." as called for in Applicant's method claim 10. The Applicant submits that it is not clear or obvious from the teaching of JP 78020780 to have applied an adhesive to a substrate then a silver-salt-containing

powder in order to expose the powder. For example, the Applicant respectfully directs the Office's attention to page 9, lines 1-9 of the Office's translation of JP 78020780, which explains JP 78020780's method of producing the sterilization device wherein:

"... glass is pulverized and run through 150 mesh. To this glass is added AgNO_3 , AgCl , and Ag metal powder discretely and mixed, and each resulting mixture is formed by a press under a pressure of 50 kg/cm^2 ... To this powder is added an epoxy resin to form an enamel, and it is printed on a substrate comprised of Mylar film and baked at 100°C for 2 hours." (Emphasis added.)

Since the reference of JP 78020780 teaches alternative methods of applying a silver-salt-containing powder to a substrate through the use of an adhesive (i.e. an epoxy resin) without first applying the adhesive to the substrate, the Applicant respectfully submits that the teaching of JP 78020780 does not anticipate Applicant's independent claim 10 or make Applicant's independent claim 10 obvious.

It is for the above reasons that the Applicant respectfully submits that Applicant's claim 10 is allowable over the JP 78020780 reference.

In regards to the reference of Rouse et al

On page 4, lines 7-8 of the Office Action dated April 11, 2006, the Office stated:

"Rouse et al (US 6238448) shows that terms "drying" and "curing" are used in the art interchangeably (See column 10, lines 2-3)." (Emphasis added.)

The Applicant respectfully disagrees with the Office's above citation of the reference of Rouse et al as supporting the Office's position that the terms "drying" and "curing" are

used in the art interchangeably. The Applicant respectfully notes that the reference of Rouse et al. is directed to the art of comminuting devices and more specifically grinding stones (column 1, lines 13-25). The Applicant's field of art is directed to water treatment mechanisms. It is respectfully submitted that the art of grinding stones is unrelated to the art of water treatment mechanisms. In view of the aforementioned, the Applicant respectfully submits that Rouse et al.'s use of the terms "drying" and "curing" should not be construed against the Applicant's claims.

Rejection under 35 U.S.C. 102(b) to JP 780100390

Applicant's claims 8 and 9 calls for a "... method of applying a water treatment composition to an article ..." including the steps of:

"... applying an adhesive to a web of material;
... applying a metal ion yielding material in particle form to the adhesive on the web; ...
...forming the particle containing web into an article for use in water purification." (Emphasis added.)

On page 3, lines 4-8 of the Office Action dated April 11, 2006, the Office rejected Applicant's claims 8- 10 under U.S.C. 102(b) as being anticipated by the reference JP 780100390. In support of the Office's aforementioned rejection, the Office on page 3, lines 6-8 of the Office action stated:

"Note that a film shaped device prepared by bonding silver-salt particles to an adhesive 22 applied to a flexible substrate 21 (See Fig. 6) is used for forming a water filtering system (See Figs. 3, 5; Translation, pages 7-8.)"

The Applicant respectfully submits that the reference JP 780100390 does not teach the above-mentioned steps of Applicant's method claims 8 and 9. It is respectfully noted that the reference of JP 780100390 instead teaches and shows (in Figure 6) the application of a resin adhesive 22 to a flexible substrate 21. The Applicant respectfully submits that JP 780100390's flexible substrate 21 is not a web of material. Further note that 780100390's resin adhesive 22 and flexible substrate 21 is eventually secured (simultaneously) to JP 780100390's meshed porous resin frame 10. (See Figure 3 of JP 780100390's) It is submitted that JP 780100390's meshed porous resin frame 10 supports JP 780100390's flexible substrate thereon or therebetween during use as shown in Figures 3 and 4 of JP 780100390.

It is for the above reasons that the Applicant respectfully submits that Applicant's independent claims 8 and 9 are allowable over the JP 780100390 reference.

In regards to Applicant's method claim 10, Applicant's method claim 10 calls for a method of making an article for in situ water treatment including the steps of:

“... applying the adhesive to the water insoluble solid structure to form at least a partial coating thereon;
applying the water treatment material to the adhesive on said solid structure;
allowing the adhesive to set to thereby secure the water treatment material to the solid structure; and
forming the structure into an article for placement into a body of water to thereby enable the structure to adhesively support the water treatment material thereon in a condition that maintains a water concentration of metal ions less than 1000 parts per billion (ppb).” (Emphasis added.)

The Applicant respectfully submits that the reference JP 780100390 does not teach the above-mentioned step of "...applying the adhesive to the water insoluble solid structure..." or the step of "... forming the structure into an article for placement into a body of water..." The reference of JP 780100390 instead teaches and shows (in Figure 6) the application of a resin adhesive 22 to a flexible substrate 21. The Applicant respectfully submits that JP 780100390's flexible substrate 21 is not a solid structure.

The Applicant submits that the reference JP 780100390 also does not teach the above-mentioned step of "...forming the structure into an article for placement into a body of water ..." Reference 780100390 instead teaches the simultaneously securement of the flexible substrate 21 containing the resin adhesive 22 and silver salt particles 23 to JP 780100390's meshed porous resin frame 10. (See Figure 3 of JP 780100390's) JP 780100390's flexible substrate is supported on or between JP 780100390's meshed porous resin frame 10 during use as shown in Figures 3 and 4 of JP 780100390.

It is for the above reasons that the Applicant respectfully submits that Applicant's independent method claim 10 is allowable over the JP 780100390 reference.

Rejection under 35 U.S.C. 103(a) to combination of the references of KR 8902848, JP 780100390, or JP 78020780 and Rosenblatt

Applicant's independent claims 8 and 9 calls for a method of applying a water treatment composition to an article including the step of "... applying a metal ion yielding material in particle form to the adhesive on the web..." and the step of "... allowing the adhesive to dry to secure the metal ion yielding material to the web of material." (Emphasis added.)

Applicant's independent method claim 10 calls for a method of making an article for insitu water treatment including the step of:

“... applying the water treatment material to the adhesive on said solid structure; allowing the adhesive to set to thereby secure the water treatment material to the solid structure;” (Emphasis added.)

On page 3, lines 15-18 of the Office Action dated April 11, 2006, the Office rejected Applicant's claims 8-10 and 12 under U.S.C. 103(a) as being unpatentable over KR 8902848/JP 780100390/JP 78020780 in view of the reference of Rosenblatt (U.S. Patent No. 6,365,169). In support of the Office's aforementioned rejection, the Office on page 6, lines 1-3 stated:

“Rosenblatt teaches curing (setting) of his PVA with iodine and other antimicrobial components in order to secure the iodine and other antimicrobial components to Rosenblatt's substrate (See column 8, lines 9).”

The Applicant strenuously but respectfully disagrees with above. The Applicant respectfully submits that Rosenblatt's column 8, lines 9-12 does not teach the curing or setting of Rosenblatt's PVA with iodine to Rosenblatt's substrate. Rosenblatt's column 8, lines 9-12 instead teaches that the curing of Rosenblatt's various substrates provides Rosenblatt's substrates with “...iodine complexing potential, that is (referring back to column 3, lines 43-45 of Rosenblatt) the ability to complex “with an iodine solution containing excess iodine.”

In further regards to the Office's above rejection, the Applicant respectfully notes that the reference of Rosenblatt does not call for the application of iodine, which Rosenblatt uses as

a disinfectant, to the PVA locate on Rosenblatt's substrate in particle form. Rosenblatt instead teaches the "complexing" of iodine in solution or liquid form to Rosenblatt's substrate. (See column 3, lines 43-45 of Rosenblatt.) The Applicant respectfully submits that the application of iodine to a substrate in particle form is different from the "complexing" of iodine to a substrate in solution or liquid form.

The Applicant also submits that using PVA, as taught by Rosenblatt, in KR 8902848 and Minami or Takahaski et al. as an adhesive does not make the above mentioned limitations of Applicant's claim 8-10 obvious as the reference of Rosenblatt does not call for the drying or the curing of his PVA with the iodine applied thereto in order to secure the iodine to Rosenblatt's substrate. Note that Rosenblatt instead teaches that the PVA is dried and cured to the Rosenblatt's substrate before the iodine is applied thereto. (See column 3, lines 39-45 of Rosenblatt.) More specifically, in column 3, lines 39-45, Rosenblatt states:

"The cured PVA impregnated substrate is washed, if necessary, and is then complexed with iodine solution containing excess iodine. The sponge is rinsed out to flush out the excess iodine."

It is for the above reasons that the Applicant respectfully submits that Applicant's claims 8-10 is allowable over the references of KR 8902848 and Minami or Takahaski et al in view of the reference of Rosenblatt.

In further regards to Applicant's claims 9 and 12, Applicant's dependent claim 9 depends on Applicant's independent claim 8 and Applicant's dependent claim 12 depends on Applicant's independent claim 10. Since Applicant's independent claim 8 and Applicant's

independent claim 10 are allowable for the reasons given above, Applicant's dependent claims 9 and 12 should also be allowable.

In view of the above, it is submitted that the application is in condition for allowance.

Allowance of claims 8-10 and 12, as amended, is respectfully requested. Applicant has enclosed a version of the amendment showing changes made with this response.

Respectfully submitted,

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Enclosure

